

OAK RIDGE NATIONAL LABORATORY

3386

Health Physics Division

To: J. C. Hart

February 25, 1952

From: C. D. Teague

Subject: High Activity of Waste Going Into White Oak Creek

At 12:25 a.m., on February 22, 1952, Health Physics personnel were notified by Mr. C. M. Blood, supervisor, Operations "F" shift, that the activity level at the diversion box of the Settling Basin was high. Questioning of Mr. Blood elicited the following information:

- (1) During the previous shift, tank W-15 in the tank farm had been steam-cleaned and the effluent had been drained to Building 3515. Due to a stopped-up hot drain, the liquid overflowed into a cold drain and from there passed to the settling basin.
- (2) The routine water samples taken by Operations personnel at the diversion box and at the Settling Basin, both of which are composite samples taken during the 4-hour period 3:00 p.m. to 7:00 p.m., gave a count of 13,000 c/m/ml for the diversion box sample and 37 c/m/ml for the Settling Basin sample.
- (3) The samples taken for the period 7:00 p.m. to 11:00 p.m. gave for the diversion box, 3842 c/m/ml, and for the Settling Basin, 2729 c/m/ml.

After ascertaining the above facts, Health Physics personnel took the following actions:

- (1) Notified the Laboratory shift supervisor concerning the condition, and consulted with him about the steps to be taken.
- (2) The Laboratory shift supervisor notified K-25 in order to give that group an opportunity to sample more frequently.
- (3) Sampled the overflow of White Oak Dam. This sample was taken at 12:55 a.m., February 22, 1952.
- (4) Raised the gate at the dam from the setting of 8.1' to 10.0' to check the water flow until necessary further steps could be determined.
- (5) Brought the sample taken at the dam to the analytical group for analysis. This analysis showed the activity of the sample to be 3 c/m/ml.

- (6) Took this report and the remainder of the sample, to Bldg. 2012, where it was placed on Mr. W. H. Abes's desk with a note of explanation.
- (7) Checked with the analytical group after analysis of the sample for the period 11:00 p.m., February 21, 1952 to 3:00 a.m., February 22, 1952. This analysis gave, for the diversion box, 255 c/m/ml, and for the Settling Basin 1468 c/m/ml.

It was felt that Health Physics personnel charged with collecting the 24-hour composite sample at the Settling Basin should be alerted not to spill any of the material from the collection box on the ground since it would, in all probability, contaminate the area.

In view of the fact that material was still going into the creek, and at that time no rain was anticipated, it was thought best to leave the dam gate raised.

The above information was submitted by P. O. Martin.

Original Signed ..

O. D. Teague

ODT/Jc

Cc to K. Z. Morgan
J. C. Hart
A. L. Warden
P. O. Martin

158 VALIDATION OF ORNL INCIDENTS/UNUSUAL OCCURRENCES(AEC-HMS)

DATE RUN 03/07/74 REPORT R096

SERIAL NUMBER	PER ORIE	AREA/FACILITY NUMBER	DATE OCCURRED	TIME OCCURRED	DURATION	WORK AREA OR PART FURTHER DEFINED	DESCRIPTION OF INCIDENT
00158	A B G NF NI NT	3507	02-22-52	1225		WHITE OAK CK	WASTE OVERFLO FM W-15 THRU 3515 TO 3513

RADIATION ENCOUNTERED	MATERIALS INVOLVED	SPECIFIC RADIONUCLIDES MIS	AIR ACTIVITY PEV (MAX UCI/CC*)	RAD B/G MAX	TACTILE PROBE READING (MAX PROBE READING)	CONTAMINATION MAX SMEAR SAMP	DATA ALP ((C/M)/(D/M)) B-G(D/M)
A B G NF NI NT							

** NOTE
 A-NO ACTION REQUIRED D-ALL WORK STOPPED
 B-ENTIRE AREA ZONED E-NORMAL WORK CONT.
 C-AREA PART ZONED F-AREA NORM C MIN.
 G-AREA NORM C MAX.
 H-CLEANUP REQUIRED
 I-AIR ACTIVITY PRESENT
 J-SURFACE CONTAMINATION PRESENT
 K-PERSONNEL EXPOSURE LIST

* H = 100X, M = 1000X, R = MR/HR, WHERE C/M, D/M, UCI/CC ARE SHOWN IN COLUMN HEADINGS

Also see HMS-0058

7nd 5-11-92

158 VALIDATION OF URNL INCIDENT/UNUSUAL OCCURRENCE (ACC-HNO)

SERIAL NUMBER	PER AREA/FACILITY NUMBER	DATE OCCURRED	TIME OCCURRED	DURATION	WORK AREA UNPAINTED	WORK AREA PAINTED	NOTES *
00158	3507	02-22-52	1225		WHITE OAK CR	WASTE OVERFLOW FM W-15 THRU 3515 FU 3513 X	ABCDEFHJK

RADIATION ENCOUNTERED	MATERIALS INVOLVED	SPECIFIC RADIONUCLIDES MIS	AIR ACTIVITY PLV	RAD B/S	TACTILE CONTAMINATION DATA *	CONTAMINATION DATA *
A-B G NF NI NT		Cr-137 U-235 U-233 U-232 U-238 U-234m	(MAX UC1/CC*) 10(-x)	MAX PROBE READING ALP (C/M) / (D/M)	MAX SKILAK SAMPLE ALP (C/M) / (D/M)	DIST GEN LAT

** NOTES
 A-NO ACTION REQUIRED D-ALL WORK STOP
 B-ENTIRE AREA ZONED E-NORMAL WORK CONI.
 C-AREA PART ZONED F-AREA NORM C MIN. G-AREA NORM C MAX.
 H-CLEANUP REQUIRED I-AIR ACTIVITY PRESENT J-SURFACE CONTAMINATION PRESENT
 K-PERSONNEL EXPOSURE LIST

* H = 100X, M = 1000X, R = MR/SHR, WHERE C/M, D/M, UC1/CC ARE SHOWN IN COLUMN HEADINGS